Electronic Version
Stylesheet Version v1.1.1

Claims

[c1] 1. An air intake for a vehicle configured to facilitate air transfer from an ambient environment outside the vehicle to a vehicle space, while inhibiting liquid transfer from the ambient environment to the vehicle space, the air intake comprising:
a housing having an inlet for receiving air from the ambient environment, and an outlet in communication with the inlet, the outlet being disposed in an upper portion of the housing and facilitating air transfer from the housing to the vehicle space; and
a first dam disposed within the housing adjacent the inlet for preventing upward fluid flow from the inlet directly to the outlet, thereby inhibiting liquid flow through the outlet.

[c2] 2. The air intake of claim 1, wherein a portion of the housing is configured for attachment to a vehicle window, and the inlet is configured to be disposed along one edge of the window.

[c3] 3. The air intake of claim 1, further comprising an air-permeable barrier disposed adjacent the inlet for inhibiting passage of non-gases from the ambient environment

into the housing.

[c4] 4. The air intake of claim 1, further comprising an air-permeable barrier disposed adjacent the outlet for inhibiting passage of non-gases through the outlet.

[c5] 5. The air intake of claim 1, further comprising a plurality of vanes disposed adjacent each other and disposed in relation to the inlet such that the vanes direct fluid flow from the inlet into the housing.

[c6] 6. The air intake of claim 5, wherein at least some of the vanes are configured to direct fluid flow from the inlet into the housing in a generally downward direction.

[c7] 7. The air intake of claim 1, further comprising a second dam disposed within the housing adjacent the inlet and the first dam, and configured to cooperate with the first dam to direct at least some fluid flow from the inlet in a generally downward direction.

[c8] 8. The air intake of claim 7, wherein the first and second dams cooperate to force at least some fluid flow from the inlet in a generally u-shaped flow path toward the outlet.

[c9] 9. The air intake of claim 7, wherein the housing includes first and second portions, and the first and sec-

ond dams constitute a unitary blocking structure integral with the first housing portion.

[c10] 10. The air intake of claim 9, wherein the second housing portion includes a channel configured to cooperate with the blocking structure to prevent fluid flow between the blocking structure and the second housing portion.

[c11] 11. An air intake for a vehicle configured to facilitate air transfer from an ambient environment outside the vehicle to a vehicle space, while inhibiting liquid transfer from the ambient environment to the vehicle space, the air intake comprising:
an inlet for receiving air from the ambient environment;
a first chamber adjacent the inlet and in communication with the inlet, the first chamber being partially defined by an upper boundary configured to prevent upward fluid flow out of the first chamber;
a plurality of vanes disposed adjacent to each other and in relation to the inlet such that the vanes direct fluid flow from the inlet to the first chamber; and
a second chamber adjacent the first chamber and having a common wall therebetween, the second chamber including an upper portion and a lower portion, the lower portion being open to the first chamber; and
an outlet in communication with the inlet, and disposed adjacent the second chamber upper portion, thereby fa-

cilitating air transfer from the second chamber to the vehicle space.

[c12] 12. The air intake of claim 11, wherein at least some of the vanes are configured to direct fluid from the inlet into the first chamber in a generally downward direction.

[c13] 13. The air intake of claim 11, further comprising an air-permeable barrier disposed adjacent the inlet for inhibiting passage of non-gases from the ambient environment into the first chamber.

[c14] 14. The air intake of claim 11, further comprising an air-permeable barrier disposed adjacent the outlet for inhibiting passage of non-gases through the outlet.

[c15] 15. The air intake of claim 11, further comprising a housing including first and second portions, the first portion including the inlet, the second portion including the outlet, and the first and second portions cooperating to form the first and second chambers.

[c16] 16. The air intake of claim 15, wherein the first housing portion is configured for attachment to a vehicle window, and the inlet is configured to be disposed along one edge of the window.

[c17] 17. The air intake of claim 15, wherein the first chamber

upper boundary and the wall between the first and second chambers constitute a unitary blocking structure integral with the first housing portion and extending from an inner surface of the first housing portion toward the second housing portion.

[c18] 18. The air intake of claim 17, wherein the second housing portion includes a channel configured to cooperate with the blocking structure to prevent fluid flow between the blocking structure and the second housing portion.

[c19] 19.An air intake for a vehicle having a window, the air intake being configured to facilitate air transfer from an ambient environment outside the vehicle to a vehicle space, while inhibiting liquid transfer from the ambient environment to the vehicle space, the air intake comprising:

a housing including a first portion having an inlet and configured to cooperate with the vehicle window to receive air from the ambient environment, the first portion including an integral dam disposed adjacent the inlet, the housing further including a second portion having an outlet and configured to cooperate with the first portion to define at least one chamber, the second portion being further configured to cooperate with the integral dam to prevent upward fluid flow from the inlet directly to the outlet, thereby inhibiting liquid flow through the outlet.

[c20] 20. A vehicle having a window, a battery compartment, and an air intake configured to facilitate air transfer from an ambient environment outside the vehicle to the battery compartment, while inhibiting liquid transfer from the ambient environment to the battery compartment, the air intake comprising:
a housing disposed adjacent the window, the housing including an inlet disposed along one edge of the window for receiving air from the ambient environment, and an outlet in communication with the inlet, the outlet being disposed in an upper portion of the housing and facilitating air transfer from the housing to the battery compartment; and
a first dam disposed within the housing adjacent the inlet for preventing upward fluid flow from the inlet directly to the outlet, thereby inhibiting liquid flow through the outlet.

[c21] 21. The vehicle of claim 20, the air intake further comprising a plurality of vanes disposed adjacent each other and disposed in relation to the inlet such that the vanes direct fluid flow from the inlet into the housing.

[c22] 22. The vehicle of claim 20, the air intake further comprising a second dam disposed within the housing adjacent the inlet and the first dam, and configured to coop-

erate with the first dam to direct at least some fluid flow from the inlet in a generally downward direction.

[c23] 23. The vehicle of claim 22, wherein the first and second dams cooperate to force at least some fluid flow from the inlet in a generally u-shaped flow path toward the outlet.

[c24] 24. The vehicle of claim 22, wherein the first and second dams constitute a unitary blocking structure integral with a portion of the housing.

[c25] 25.A vehicle window configured to facilitate air transfer from an ambient environment outside the vehicle to a vehicle space, while inhibiting liquid transfer from the ambient environment to the vehicle space, the vehicle window comprising:
an air intake including a housing having an inlet for receiving air from the ambient environment, and an outlet in communication with the inlet, the outlet being disposed in an upper portion of the housing and facilitating air transfer from the housing to the vehicle space, the air intake further including a first dam disposed within the housing adjacent the inlet for preventing upward fluid flow from the inlet directly to the outlet, thereby inhibiting liquid flow through the outlet.